AF
SJFW

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:			
Application No.:	**09/486,723**	**Examiner:**	**P. Pich**
Filing Date:	**May 18, 2000**	**Art Unit:**	**2135**
First Inventor:	**Michael LAMLA**	**Customer No.:**	**23364**
Attorney No.:	**LAML3003/JJC/JS**	**Confirmation No.:**	**2431**
For:	**Method for Testing the Authenticity of a Data Carrier**		

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal brief is pursuant to the appellants' appeal to the Board of Patent Appeals and Interferences from the final rejection of the claims in the above-application.

04/18/2007 MAHMED1 00000009 09486723
01 FC:1402 500.00 OP

I. REAL PARTY OF INTEREST

The real party in interest is the assignee of record: Giesecke & Devrient GmBH (Munich, GERMANY).

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-14 are currently pending in the above-referenced application.

Claims 1-14 presently stand rejected.

Applicants appeal from the rejection of independent claims 1, 8, 12, and 14.

A complete copy of appealed claims 1, 8, 12, and 14, and the non-appealed claims 2-7, 9-11, and 13, are included herewith in Appendix I.

IV. STATUS OF AMENDMENTS

No amendment has been filed subsequent to final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides a data carrier, and a system and method for testing the authenticity of the data carrier.

The appealed claims recite a data carrier, and a system and method for testing the authenticity of the data carrier, wherein two bidirectional data channels are provided between the data carrier and an external device. Signals are transferred via the first data channel for the purpose of exchanging data between the data carrier and the external device, and authenticity signals are transferred between the data carrier and the external device. The first and second data channels are logically separate from one another.

Claim 1

Claim 1 recites a method for testing the authenticity of a data carrier having an integrated circuit by an external device with which the data carrier exchanges data, that includes the steps of providing a first bidirectional transmission channel (*A*) for transmitting signals having signal patterns between the data carrier (1) and the external device (2) (page 4, lines 10-18; page 5, lines 28-31; Fig. 1), and providing a second bidirectional transmission channel (*B*) logically separated from the first bidirectional transmission channel (*A*) (page 4, lines 24-26; page 5, lines 28-31; page 5, line 31-page 6, line 11; Fig. 1), the separation of the first and second bidirectional transmission channels (*A,B*) being so designed that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel and the second bidirectional transmission channel (*B*) is activable during the total time period between activation and deactivation of the data carrier (1) (page 2, line 29-page 3, line 1; page 5, line 31-page 6, line 11; Abstract).

The data carrier (1) generates a signal required for authenticity testing, and the signal for authenticity testing is transmitted from the data carrier (1) to the external device (2) or a signal required for generating the signal for authenticity testing is transmitted from the external device (2) to the data carrier (1) at least partly via the second bidirectional transmission channel (*B*) (page 5, lines 7-10), and the external

device (2) receives the signal for authenticity testing and decides on the basis of the received signal whether the data carrier (1) is authentic (page 5, lines 10-12).

Claim 8

Claim 8 recites a method for testing the authenticity of a data carrier having an integrated circuit by an external device with which the data carrier exchanges data, that includes the steps of providing a first bidirectional transmission channel (*A*) for transmitting signals having signal patterns between the data carrier (1) and the external device (2) (page 4, lines 10-18; page 5, lines 28-31; Fig. 1), and providing a second bidirectional transmission channel (*B*) physically separated from the first bidirectional transmission channel (*A*) (page 4, lines 24-26; page 5, lines 28-31; page 5, line 31-page 6, line 11; Fig. 1), and comprising at least one line or contactless transmission path not provided according to the ISO standard (page 3, lines 1-14; page 9, lines 1-12; page 10, lines 27-30), the second bidirectional transmission channel (*B*) being activable during the total time period between activation and deactivation of the data carrier (1) (page 5, line 31-page 6, line 11; Abstract).

The data carrier (1) generates a signal required for authenticity testing, and the signal for authenticity testing is transmitted from the data carrier (1) to the external (2) device or a signal required for generating the signal for authenticity testing is transmitted from the external device (2) to the data carrier (1) at least partly via the second bidirectional transmission channel (*B*) (page 5, lines 7-10), and the external device (2) receives the signal for authenticity testing and decides on the basis of the received signal whether the data carrier (1) is authentic (page 5, lines 10-12).

Claim 12

Claim 12 recites a data carrier which can exchange data with an external device and has an integrated circuit, wherein the data carrier (1) has a first device (3) for generating signals for data exchange between the data carrier (1) and the external device (2), and the first device (3) is adapted to be coupled to a first bidirectional transmission channel (page 4, lines 10-23; Fig. 1), the data carrier (1) has a second device (4) for generating signals required for authenticity testing of the data carrier (1), and the second

device (4) is adapted to be coupled to a second bidirectional transmission channel (*B*) and connected with the first device (3) (page 4, line 24-page 5, line 4; Fig. 1), the first and second bidirectional transmission channels (*A,B*) are separated logically or physically (page 5, line 28-page 6, line 11), and data exchange with the second device (4) does not interfere with data exchange with the first device (3), and the second device (4) is ready for generating signals for authenticity testing of the data carrier (1) during the total time period between activation and deactivation of the data carrier (1) (page 2, line 29-page 3, line 1; page 5, line 31-page 6, line 11; Abstract).

Claim 14

Claim 14 recites a system for testing the authenticity of a data carrier and/or an external device, comprising a data carrier (1) with a first device (3) for generating signals for data exchange with the external device (2) and a second device (4) for generating and/or processing signals for authenticity testing (page 4, lines 10-26; page 5, lines 28-31; page 5, line 31-page 6, line 11; Fig. 1), an external device (2) with a first device (5) for generating signals for data exchange with the data carrier (1) and a second device (6) for generating and/or processing signals for authenticity testing (page 4, line 10-page 5, line 12), a first bidirectional transmission channel (*A*) for transmitting signals between the first device (3) of the data carrier (1) and the first device (5) of the external device (5) (page 4, lines 10-23), and a second bidirectional transmission channel (*B*) for transmitting signals between the second device (4) of the data carrier and the second device (6) of the external device (2) (page 4, line 24-page 5, line 4), the first and second bidirectional transmission channels (*A,B*) being separated logically or physically and the separation of the first and second bidirectional transmission channels (*A,B*) being so designed that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel (page 2, line 29-page 3, line 1; page 5, line 31-page 6, line 11; Abstract), and the second bidirectional transmission channel (*B*) being activable during the total time period between activation and deactivation of the data carrier (1) (Abstract).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 8-10, 12, and 14 stand finally rejected under U.S.C. § 102(e) as being anticipated by *Saliba* (U.S. 5,894,425).

Claims 1-4, 6, 7, 11, and 13 stand finally rejected under U.S.C. § 103(a) as being unpatentable over *Saliba* in view of *Ehrat*.

Claim 5 stands finally rejected under U.S.C. § 103(a) as being unpatentable over *Saliba* in view of *Ehrat* in further view of official notice by the examiner.

The rejection of claims 2-7, 9-11, and 13 is not addressed herein because only the independent claims 1, 8, 12, and 14 are appealed.

VII. ARGUMENT

A. Overview

The Examiner has failed to establish that the present invention is prima facie anticipated by *Saliba* because each and every claimed element is not found, either expressly or inherently, in *Saliba*.

Further, the Examiner has failed to establish prima facie obviousness of the present invention by combining the teachings of the *Saliba* and *Ehrat* patents because *Saliba* and *Ehrat* together fail to disclose or suggest each and every feature recited in claims 1, 8, 12, and 14 of the pending application. Moreover, even assuming, *arguendo*, that all of the features recited in claims 1, 8, 12, and 14 of the pending application may be found between *Saliba* and *Ehrat* (although they are not), these references may not be properly combined to form a prima facie basis for rejection of the present invention because the required motivation, suggestion, or teaching to select and combine the references is lacking.

B. Pertinent Law

1. Anticipation

As set forth in the MPEP, "to anticipate a claim, the reference must teach every element of the claim." (MPEP § 2131). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Claim terms are "given their broadest reasonable interpretation consistent with the specification." (MPEP § 2111). During patent examination, the scope of the claims

is determined "upon giving claims their broadest reasonable construction 'in light of the specification as it would be interpreted by one of ordinary skill in the art.'" (MPEP § 2111, quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004).

Claim terms are to be given their plain meaning, unless the plain meaning is inconsistent with the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

"Plain meaning" refers to the ordinary and customary meaning given to the term by those of ordinary skill in the art. (MPEP § 2111.01 III). "The ordinary and customary meaning of a term may be evidenced by a variety of sources, including 'the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.'" (MPEP § 2111.01 III, quoting *Phillips v. AWH Corp.*, 415 F.3d at 1314).

2. Obviousness

To establish prima facie obviousness of a claimed invention, under 35 U.S.C. § 103, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Identification of each element of a claimed invention in prior art references is insufficient to defeat patentability of the whole claimed invention. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching to select and combine the references relied on as evidence of obviousness. *In re Lee*, 277 F.3d 1338, 1342-43, 61 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 2002) (citing *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001)).

In making a rejection based on obviousness, particular findings and specific reasons must be provided as to why a skilled artisan would have been motivated to select references and to combine them to render a claimed invention obvious. See *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); See also *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2d 1453, 1459 (Fed. Cir. 1998). Evidence of the motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

The Federal Circuit in *Dembiczak* emphasized that a "rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references" is required. The court said that "the showing must be clear and particular" and that broad conclusory statements regarding the teaching of multiple references and "a mere discussion of the ways that the multiple prior art references can be combined to read on the claimed invention" is inadequate. Absent an explicit suggestion or teaching of the combination in the prior art references, there must be "specific [...] findings concerning the identification of the relevant art, the level of ordinary skill in the art, the nature of the problem to be solved, or any other factual findings that might serve to support a proper obviousness analysis". When general knowledge is relied upon to negate patentability, that knowledge must be articulated in the record and cannot be resolved on "subjective belief and unknown authority." *Lee*, 277 F.3d at 1342-1345, 61 U.S.P.Q.2d at 1433-35.

C. Basic Description of the *Saliba* Patent

The *Saliba* disclosure describes a secondary data exchange interface for accessing a digital mass storage device, and more particularly a wireless secondary communications interface between a control data/acquisition unit and a mass storage device (col. 1, lines 5-10).

A computer 10 includes plural mass storage devices 16, 18, 20, 22 each having at least one bidirectional IR (infra-red) unit 24, wherein the IR unit 24 provides a secondary wireless IR bidirectional data port optically accessible by a device external to the computer (field unit 50). The mass storage drives 16, 18, 20, 22 are connected to a motherboard of the computer via conventional bus connections. (col. 4, lines 41-56; col. 5, lines 27-43; Fig. 1).

The field unit 50 includes an IR send/receive unit 52, most preferably a portion of a PCMCIA card or "PC card" 53, for communicating with a mass storage drive. (col. 5, lines 29-35).

The field unit 50 may optionally include a wireless radio send/receive unit 54 enabling communications with a remotely located host computer 60 also equipped with a compatible communications unit 62. (col. 5, lines 44-48). So equipped, the field unit 50 may communicate on the one hand via the IR send/receive unit 52 with one of the mass storage drives 16, 18, 20, 22, and on the other hand via the wireless radio send/receive unit 54 with the remotely located host computer 60.

D. Basic Description of the *Erhat* Patent

The *Erhat* disclosure describes an identification system for separately identifying each of a plurality of individuals (col. 1, lines 5-7). The system includes an identification unit 10, coupled to a testing station 11.

Each identification unit 10 has data stored therein, which is different from data stored in other identification units 10, and a generator for generating pulse sequences according to the stored data. (Abstract). The testing station 11 also includes a store for storing data, and a generator for generating pulse sequences identical to the pulse sequences generated by the identification units 10, so that when an identification unit 10 is coupled to the testing station 11 the identification unit 10 compares the first pulse sequence generated thereby with the first pulse sequence generated by the testing station 11. If the sequences are found to be identical, the identification unit 10 generates a

second sequence which is compared in the testing unit 11 with a second sequence generated by the testing unit 11. (Abstract).

When the identification unit 10 is coupled to the testing station 11, the pulse sequences and other operating signals or voltages are exchanged. (Col. 2, lines 26-33). In one embodiment of Fig. 4, coupling between the identification unit 10 and the testing station 11 is by radio means. (col. 2, lines 8-11; col. 6, lines 13-33; Fig. 4).

E. The Subject Matter Recited in Claims 1, 8, 12, and 14 is Not Anticipated by *Saliba*.

1. *Saliba* does not teach or suggest each and every feature recited in claims 1, 8, 12, and 14 of the pending application.

Each of claims 1, 8, 12, and 14 require first and second bidirectional communication channels for transmitting signals between a data carrier and an external device. It must be noted that, according to each of claims 1, 8, 12, and 14, the first and second bidirectional channels each communicate with the ***same*** external device. In other words, the data carrier and an external device employ the two (first and second) communication channels to communicate therebetween.

Saliba does not teach or suggest first and second bidirectional communication channels for transmitting signals between a data carrier and an external device.

Saliba discloses a field unit 50, having a data communication channel for communicating between the field unit 50 and a drive unit 16, 18, 20, 22 of a computer 10. The data communication channel is disclosed as an infrared (IR) interface. (see *Saliba*; col. 5, lines 26-43; col. 6, lines 17-36). Separately, the field unit 50 optionally includes a wireless radio send/receive unit 54, such as for cellular wireless communication, for communicating with a remote host computer 60. (see *Saliba*; col. 5, lines 44-46).

Saliba's field unit 50 may communicate on the one hand via the IR send/receive unit 52 with one of the mass storage drives 16, 18, 20, 22, and on the other hand via the wireless radio send/receive unit 54 with the remotely located host computer 60. The field unit 50 does not, however, communicate with either the mass storage drives 16, 18, 20, 22 or the remotely located host computer 60 by first and second bidirectional transmission channels, since there is only a single communication channel between the field unit 50 and a mass storage drives 16, 18, 20, 22, and another single communication channel between the field unit 50 and the remotely located host computer 60.

In the final Office action mailed on November 17, 2006 (hereafter "*the action*"), the examiner states that "cited Figure 1 shows two devices which could be viewed as the data carrier having two logically separate channels, i.e. item 50 and item 12" (*the action*; page 2). The examiner further states that "one can view item 50 as the data carrier ahd it has channel 54. Because channel 54 is physically separate from channel 52, it is also logically separate from channel 52" (the action; page 3).

However, channel 54 and channel 52 do not each communicate with the same external device, since channel 54 communicates only with the remote host computer 60, while channel 52 communicates only with the computer 10's mass storage drives.

While the examiner asserts that "the languages of the claims do not state that communication via the channels of the data carrier is with only a single unit external device," it is respectfully submitted that the claims in fact do require that both the first and second communication channels are in communication with the same external device.

Referring to claim 1, the first bidirectional transmission channel is provided between the data carrier and the external device. Moreover, claim 1 provides that the signal for authenticity testing is transmitted from the ***data carrier to the external device***, or a signal required for generating the signal for authenticity testing is transmitted from ***the external device to the data carrier***, at least partly via the second bidirectional

transmission channel. It necessarily follows then that the second bidirectional transmission channel is also provided between the data carrier and the external device.

Moreover, the preamble of claim 1 describes testing the authenticity of a data carrier by ***an external device***. Subsequent references are to ***the external device***. Since only one external device is referenced, and since the first and second channels are referenced with respect to ***the external device***, it is clear that the first and second channels are both provided between the data carrier and the same external device.

The examiner further states that, in Figure 1, "item 50 can have two separate IR channels 52, thus the two separate IR channels could also be viewed as two logically separate channels since one channel is achieved via the logic in memory card 53 while another is via the logic built into item 50" (*the action*; page 3). However, this interpretation is not supported by *Saliba's* disclosure.

While Fig. 1 does show two IR units 52, the corresponding text clarifies that "a field unit 50 [...] includes ***an IR send/receive unit 52***. Most preferably, although not necessarily, ***the IR unit 52*** is a portion of a PCMCIA card or 'PC card' 53." (col. 5, lines 27-30) (emphasis added). Each subsequent reference to the IR unit 52 is singular. *Saliba* does not teach or suggest that the field unit 50 can be provided with two IR units 52, but merely provides that the IR unit 52 can be, alternatively, built into the field unit 50 or preferably part of the PCMCIA card 53.

Since the field unit 50 has only a single IR unit, *Saliba* cannot disclose or suggest first and second physical transmission channels between the field unit 50 and the mass storage drives 16, 18, 20, 22 of the computer 10. Further, *Saliba* makes no teaching or suggestion of separate logical channels.

The examiner further asserts that "if one were to view computer 12 as the data carrier, each of the IR channels 24 are separate physical channels" (*the action*; page 3). However, the IR send/receive units 24 of the mass storage drives 16, 18, 20, 22 of the computer 10 can only be construed to represent different channels if there are

corresponding send/receive units for each. Since the only potential communicating partner for the IR send/receive units 24 of the mass storage drives 16, 18, 20, 22 of the computer 10 is the field unit 50, and the field unit 50 possesses a single IR send/receive unit, there is no teaching or suggestion of the separate first and second communication channels required by the claims.

Saliba does not disclose or suggest any device that communicates with another device via both first and second bidirectional transmission channels. Therefore, Saliba does not anticipate any of claims 1, 8, 12, and 14.

F. The Subject Matter Recited in Claim 1 is Not Obvious Over *Saliba* in view of *Ehrat*.

1. *Saliba* and *Ehrat* even taken together do not teach or suggest each and every feature recited in claim 1 of the pending application.

As discussed above, *Saliba* does not disclose or suggest any device that communicates with another device via both first and second bidirectional transmission channels. *Ehrat* also fails to disclose or suggest any device that communicates with another device via both first and second bidirectional transmission channels, as required by claim 1.

In a first embodiment illustrated in Fig. 1, *Ehrat* discloses an identification unit 10 coupled to a testing station 11 via several "connecting lines." These include connecting line 18, which connects a clock generator 19 of the testing station 11 to the identification unit 10 (*Ehrat*; col. 2, lines 40-45); connecting line 35 which connects a signal from the identification unit 10 to the testing station 11 (*Ehrat*; col. 4, lines 12-13); connecting line 50 which connects a signal from the testing station 11 to the identification unit 10 (*Ehrat*; col 3, lines 27-32); connecting line 37 which connects a signal from the testing station 11 to the identification unit 10 (*Ehrat*; col 4, lines 12-15); connecting line 58 which connects a signal from the identification unit 10 to the testing

station 11 (*Ehrat*; col. 3, lines 49-50); and connecting line 60, which connects a signal from the testing station 11 to the identification unit 10 (*Ehrat*; col 3, lines 49-50).

None of the connecting lines 18, 35, 37, 50, 58, and 60 is a bidirectional transmission channel, since each of the connecting lines 18, 35, 37, 50, 58, and 60 conveys a signal in only a single direction. Therefore, the embodiment of Fig. 1 has ***no*** bidirectional transmission channels, and therefore cannot be construed to disclose or suggest first and second bidirectional transmission channels.

In an embodiment shown in Fig. 2, the connecting lines 18, 35, 37, 50, 58, and 60 are replaced such that "different connecting lines may be synonymous with ***one and the same physical conductor***" (*Ehrat*; col. 4, lines 53-55) (emphasis added). In other words, the several connecting lines are replaced with a ***single*** physical conductor.

Stated in greater detail by *Ehrat*, "the entire data exchange between the identification unit 10 and the testing station 11 takes place via two sets of couplings 264, 66 on the unit and 65, 67 on the testing station" (*Ehrat*; col. 4, lines 62-67). The couplings 264, 65 are provided to connect a ***reference voltage (for example ground)*** to the unit 10 and the testing station while the couplings 66, 67 are each connected to a switching circuit 68 or 69, respectively" (*Ehrat*; col. 5, lines 1-5) (emphasis added).

The couplings 264, 65 providing a reference voltage are not a transmission channel, and more particularly are not a bidirectional data channel. Data is only transferred via the single path connected by couplings 66 and 67, consistent with *Ehrat's* teaching that the "different connecting lines may be synonymous with ***one and the same physical conductor***" (*Ehrat*; col. 4, lines 53-55) (emphasis added).

Therefore, the embodiment of Fig. 2 discloses only a single transmission channel, and thus cannot be construed to disclose or suggest two bidirectional transmission channels.

Turning to another embodiment illustrated in *Ehrat's* Fig. 4, "Fig. 4 shows details of a modification of the embodiment described above in which the operating

potentials as well as the data sequences and timing pulses are transmitted between the data identification unit 10 and the testing station 11 by radio means" (*Ehrat*; col. 6, lines 13-17).

In this embodiment, *Ehrat* discloses a single duplex transmission channel. According to the duplex scheme for communicating, first and second devices each have a transmitter and a receiver, whereby a single bi-directional communication channel is established. *Ehrat* notes that each system "has a transmission channel 82 or 83 and a reception channel 84 or 85 respectively" (*Ehrat*; col. 6, lines 23-24).

As *Ehrat* states, "duplex transmission may operate with two different transmission frequencies so that transmission may take place simultaneously in both directions." (*Ehrat*; col. 6, lines 33-35). However, this does not describe two bidirectional communication channels. Instead, the duplex scheme described by *Ehrat* comprises only two mono-directional channels which together make up only ***a single bidirectional*** channel.

Therefore, the embodiment of Fig. 4 can be construed to include either two mono-directional transmission channels or a single bidirectional transmission channel, but cannot be construed to disclose or suggest two (first and second) bidirectional transmission channels.

Further, *Ehrat* does not disclose or suggest any alternatives for this duplex arrangement, and *Ehrat* does not disclose or suggest any need for any such alternative.

The embodiment of *Ehrat's* Fig. 4 also includes means for inductively powering the identification unit 10 by the testing unit 11 (*Ehrat*; col. 6, lines 41-47). However, this arrangement is not bidirectional, since power is induced in the identification unit 10 by the testing station 11, but no signal of any type is conveyed from the identification unit 10 to the testing unit 11. Moreover, such an inductive power transfer would not be considered by persons skilled in the art to be a transmission channel as recited in claim 1. Therefore, the means for inductively powering the identification unit 10 by the testing unit 11 does not constitute a bidirectional transmission channel.

The examiner has stated that "Ehrat discloses one physical channel being

modulated so that two separate bidirectional logical radio channels are achieved," and that "Ehrat discloses that transmission can occur simultaneously in both directions, thus transmission on one logical channel does not interfere with transmission on the other logical channel" (*the action*; page 12).

However, as discussed above, *Ehrat* does not disclose two separate bidirectional channels. In the passage of *Ehrat* (col. 6, lines 13-36) that the examiner references, *Ehrat* describes only a single duplex channel comprising a "transmission channel 82 or 83 and a reception channel 84 or 85 respectively" disposed in the identification unit 10 and the testing station 11.

Referring to Fig. 4, it can be seen that the transmitter 83 of the testing station 11 and the receiver 84 of the identification unit 10 together form a single mono-directional channel from the testing station 11 to the identification unit 10. Similarly, the transmitter 82 of the identification unit and the receiver 81 of the testing station 11 together form a single mono-directional channel from the identification unit 10 to the testing station 11.

Neither the transmitter 83 and receiver 84, nor the transmitter 82 and receiver 81, form a bidirectional channel. Even construing this arrangement to correspond to a single bidirectional channel (one direction being provided by transmitter/receiver pair 83, 84 and another direction being provided by transmitter/receiver pair 82, 81), there is no teaching or suggestion of two bidirectional channels.

Therefore, *Saliba* and *Ehrat* both fail to disclose or suggest the first and second bidirectional transmission channels between a data carrier and an external device as required by claim 1, and therefore a prima facie case of obviousness based on these references cannot be made.

2. There is no or motivation, suggestion, or teaching to select and combine *Saliba* and *Ehrat*.

There is no motivation, suggestion, or teaching to select and combine *Saliba* and *Ehrat*.

Saliba provides a means for communication, via a single bidirectional channel, between a computer mass storage device and a field unit such as a Personal Digital Assistant (PDA), and further communication, such as via cellular communication, between the PDA and a remotely located host computer.

Since *Saliba* is primarily concerned simply with exchanging data between the devices, which *Saliba* accomplishes via single bidirectional channels, there is simply no reason to alternatives such as two bidirectional channels between each communicating pair of devices.

Neither *Saliba* nor *Ehrat* provide any teaching or suggestion that would lead a person skilled in the art toward substituting a single bi-directional channel with two bidirectional channels between a pair of communicating devices. This would appear to be unnecessary to *Saliba*, and unnecessarily complex when the single bi-directional channel is sufficient.

Ehrat is directed to an identification unit such as for identification of authorized personnel. The identification unit communicates with a testing station via direct contact, inductive coupling, or transmitting or reception aerials (*Ehrat*; col. 4, lines 65-67).

It is clear that at least the direct contact and inductive coupling embodiments are expected to function over a limited range. There is no teaching or suggestion that any significant increase in range is desirable. In fact, it is submitted that persons skilled in the art would recognize that a somewhat limited range is desirable, to prevent inadvertent "authorization" at a testing station by individuals not in close proximity to the testing station.

Therefore, there is no reason for a person skilled in the art to turn to the teachings of such an identification unit as a source of communication methods to be applied in a system such as *Saliba*, wherein limitation of range between the PDA and the mass storage device would hamper a technician's accessibility to the mass storage device, and limitation of the cellular communication to the remotely located host computer is clearly undesirable.

VIII. CONCLUSION

For the reasons set forth above, claims 1, 8, 12, and 14 of the pending application define subject matter that is not anticipated within the meaning of 35 U.S.C. § 102 by *Saliba*, or rendered obvious within the meaning of 35 U.S.C. § 103 by *Saliba* and *Ehrat*.

Therefore, reversal of the rejection of claims 1, 8, 12, and 14 is respectfully requested. Further, because the remaining claims (2-7, 9-11, and 13) each depend from one of claims 1, 8, 12, and 14, the reversal of the rejection of claims 2-7, 9-11, and 13 is also respectfully requested.

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
Phone: (703) 683-0500

Date: April 17, 2007

Respectfully submitted,

JOHN R. SCHAEFER
Attorney for Applicants
Registration No. 47,921

APPENDIX I - CLAIMS

Claim 1. A method for testing the authenticity of a data carrier having an integrated circuit by an external device with which the data carrier exchanges data, comprising the steps of:

providing a first bidirectional transmission channel for transmitting signals having signal patterns between the data carrier and the external device,

providing a second bidirectional transmission channel logically separated from the first bidirectional transmission channel, the separation of the first and second bidirectional transmission channels being so designed that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel and the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier,

having the data carrier generate a signal required for authenticity testing,

transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating the signal for authenticity testing from the external device to the data carrier at least partly via the second bidirectional transmission channel, and

having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic.

Claim 2. A method according to claim 1, characterized in that the second bidirectional transmission channel is provided by modulating the signal of the first bidirectional transmission channel.

Claim 3. A method according to claim 2, characterized in that modulation does not impair an ISO compatibility of data exchange between the data carrier and the external device existing for the first bidirectional transmission channel.

Claim 4. A method according to claim 2, characterized in that modulation is performed in areas of the signal pattern which are not evaluated according to ISO 7816.

Claim 5. A method according to claim 2, characterized in that the changes caused by modulation in the signal of the first bidirectional transmission channel are within the range of variation of the signal level permitted by ISO 7816.

Claim 6. A method according to claim 2, characterized in that modulation and demodulation of the signal are performed in the data carrier and in the external device with the aid of a mixing/demixing device in each case.

Claim 7. A method according to claim 1, characterized in that the first bidirectional transmission channel is a line for transmitting standard data or a line for transmitting a clock signal or a line for supply voltage.

Claim 8. A method for testing the authenticity of a data carrier having an integrated circuit by an external device with which the data carrier exchanges data, comprising the steps of:

providing a first bidirectional transmission channel for transmitting signals between the data carrier and the external device,

providing a second bidirectional transmission channel physically separated from the first bidirectional transmission channel and comprising at least one line or contactless transmission path not provided according to the ISO standard, the second

bidirectional transmission channel being activable during the total time period between activation and deactivation of the data carrier,

having the data carrier generate a signal required for authenticity testing,

transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating said signal for authenticity testing from the external device to the data carrier at least partly via the second bidirectional transmission channel, and

having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic.

Claim 9. A method according to claim 8, characterized in that the contactless transmission path is realized by transmitting the data as electromagnetic, electrostatic, magnetic, acoustic or optical signals.

Claim 10. A method according to claim 9, characterized in that a mixture of wavelengths is used for transmission via the contactless transmission path.

Claim 11. A method according to claim 1, characterized in that the decision on authenticity of the data carrier is contingent on whether data exchange is possible between the devices to which the first and second bidirectional transmission channels are coupled in the data carrier.

Claim 12. A data carrier which can exchange data with an external device and has an integrated circuit, wherein

the data carrier has a first device for generating signals for data exchange between the data carrier and the external device, and the first device is adapted to be coupled to a first bidirectional transmission channel,

the data carrier has a second device for generating signals required for authenticity testing of the data carrier, and the second device is adapted to be coupled to a second bidirectional transmission channel and connected with the first device,

the first and second bidirectional transmission channels are separated logically or physically, and

data exchange with the second device does not interfere with data exchange with the first device, and the second device is ready for generating signals for authenticity testing of the data carrier during the total time period between activation and deactivation of the data carrier.

Claim 13. A data carrier according to claim 12, characterized in that the first device and the second device are each coupled to the bidirectional transmission channels via a mixing/demixing module.

Claim 14. A system for testing the authenticity of a data carrier and/or an external device comprising:

a data carrier with a first device for generating signals for data exchange with the external device and a second device for generating and/or processing signals for authenticity testing,

an external device with a first device for generating signals for data exchange with the data carrier and a second device for generating and/or processing signals for authenticity testing,

a first bidirectional transmission channel for transmitting signals between the first device of the data carrier and the first device of the external device,

and a second bidirectional transmission channel for transmitting signals between the second device of the data carrier and the second device of the external device, the first and second bidirectional transmission channels being separated logically or

physically and the separation of the first and second bidirectional transmission channels being so designed that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel, and the second bidirectional transmission channel being activable during the total time period between activation and deactivation of the data carrier.

APPENDIX II - EVIDENCE

- There is no evidence submitted.

APPENDIX III – RELATED PROCEEDINGS

- There are no related proceedings.